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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,405	11/20/2001	Tommy W. Lewis	TOK00-051	3757

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EXAMINER	
LEE, PING	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/996,405	LEWIS, TOMMY W.	
	Examiner	Art Unit	
	Ping Lee	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/20/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4-15, 18-21, 24-29, 31-35, 37-49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leatherman et al (US 6,052,629) in view of Roger et al (US 6,494,363).

Regarding claims 1, 4, 5, 11-15, 18, 19, 26, 28, 29, 31, 32, 39, 40, 42, 43, 45-47, 49 and 51, Leatherman et al (hereafter Leatherman) disclose a system for use with a fuel dispenser position (12) in refueling environment, said system comprising: a microphone (44 as shown in Fig. 2) assembly disposed at said fuel dispenser position (12); and a processing assembly operatively associated with said microphone assembly (44).

Leatherman fails to show the microphone assembly has a plurality of directional microphones and the corresponding processing assembly for processing microphones' signals. It was a common knowledge that the user in a fuel dispenser environment would experience noise. Roger et al (hereafter Roger) teaches how to use a plurality of microphones and a processor to eliminate the noise surrounding the user (col. 6, lines 24-38). The microphones suggested by Roger are directional microphones because Figs. 6A-6C show different directional coverage and only one of the microphones will

provide a dominant sound. If Roger's microphones were omnidirectional microphones, the processor would not be able to determine the dominant one and eliminate the noise. Thus, it would have been obvious to one of ordinary skill in the art to modify Leatherman in view of Roger by using a plurality of directional microphones and a processor to select the one picked up most of the voice from the user in order to enhance the bi-directional communication between the user at the fuel dispenser position and the operator at a remote station.

Regarding claims 6-8, 20, 21, 24, 25, 34, 35, 37, 38 and 48, Leatherman teaches bi-directional communication through coupling means (internet); therefore, a first speaker system is inherently included at the fuel dispensing position and the second speaker system is inherently included at the operator facility. However, Leatherman fails to show a plurality of directional microphones at the operator facility. Leatherman teaches a general bi-directional communication using a general speaker and a general microphone. It was a common knowledge that environmental noise poses a risk for speech communication. Rogers teaches how to reduce this noise using a plurality of directional microphones. Of course, the cost would be higher with more than one microphone. Therefore, if cost is not a concern, one skilled in the art would modify Leatherman in view of Roger by using a plurality of directional microphones and a processor at the operator facility in order to enhance the bi-directional communication between the user at the fuel dispenser position and the operator at a remote station.

Regarding claims 9, 10, 27, 33, 41 and 44, Leatherman teaches the fuel dispenser apparatus (12) and a dispenser controller (32) connected to the microphone.

However, Leatherman fails to explicitly show that the microphone signal is being used to generate a command signal for use by the dispenser controller. Roger teaches a speech recognition unit (52) to process the microphone signal and generate a command signal for use by the controller. Thus, it would have been obvious to one of ordinary skill in the art to modify Leatherman in view of Roger by incorporating a speech recognition unit to process the user's audible control in order to enable dispenser controller to perform various tasks without the user's manual input using the hand.

3. Claims 1-3, 14-17, 20-23, 28-30, 34-36, 42, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leatherman in view of Venkatesh et al (US006748086B1).

Regarding claims 1-3, 14-17, 28-30, 42, 49 and 50, Leatherman discloses a system for use with a fuel dispenser position (12) in refueling environment, said system comprising: a microphone (44 as shown in Fig. 2) assembly disposed at said fuel dispenser position (12); and a processing assembly operatively associated with said microphone assembly (44).

Leatherman fails to show the microphone assembly has a plurality of directional microphones and the corresponding processing assembly for processing microphones' signals. Leatherman teaches a general bi-directional communication system using general microphone assembly. However, one skilled in the art would have expected that any specific design of microphone assembly could be used without generating any unexpected result. It was a common knowledge that the user in a fuel dispenser environment would experience a tremendous amount of noise. Venkatesh et al

(hereafter Venkatesh) teaches how to use a plurality of directional microphones (col. 5, lines 1-2) and a beamforming processor (col. 4, lines 64-67) to eliminate the noise and enhancing the speech. Thus, it would have been obvious to one of ordinary skill in the art to modify Leatherman in view of Venkatesh by using a plurality of directional microphones and a beamforming processor forming a composite microphone signal in order to improve the speech reception.

Regarding claims 20-23 and 34-36, Leatherman teaches bi-directional communication through coupling means (internet); therefore, a first speaker system is inherently included at the fuel dispensing position and the second speaker system is inherently included at the operator facility. However, Leatherman fails to show a plurality of directional microphones at the operator facility. Leatherman teaches a general bi-directional communication using a general speaker and a general microphone. It was a common knowledge that environmental noise poses a risk for speech communication for both the operator and the user at the dispensing position. Venkatesh teaches how to reduce this noise using a plurality of directional microphones. Of course, the cost would be higher with more than one microphone. Therefore, if cost is not a concern, one skilled in the art would modify Leatherman in view of Venkatesh by using a plurality of directional microphones and a beamforming processor at the operator facility in order to enhance the bi-directional communication between the user at the fuel dispenser position and the operator at a remote station.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ping Lee
Primary Examiner
Art Unit 2644

pwl